Pavor nocturnus from a brainstem glioma

Pavor nocturnus or night terrors usually occur in the absence of identifiable neuropathology. This report documents pavor nocturnus associated with a brainstem lesion.

A 15 year old boy with headaches and ataxia had a brainstem tumour on CT (see fig). The patient underwent resection of a grade I cerebellar astrocytoma arising from the fourth ventricle and adherent to the brainstem. His postoperative examination disclosed dysarthria, spontaneous vertical nystagmus, bilateral sixth nerve paresis, decreased sensation on the face bilaterally, facial diplegia, sensorineural hearing loss, mild dysmetria and ataxia, and decreased reflexes with bilateral Babinski responses.

Postoperatively he developed a sleep disorder where he suddenly sat up in bed, screamed, and appeared to be staring in fright. During episodes, he was agitated and would try going over the rails of the bed or would thrash about in bed screaming. After one or two minutes, he promptly fell back to sleep. The patient had incomplete recollections of these episodes. Sometimes the only evidence of an episode was injury or blood on the floor. At other times, he recalled being frightened by images of parts of people sticking out of walls or by the belief that the bedposts were his room mates restraining him. The patient subsequently became depressed and had aggressive outbursts and paranoid beliefs. Before his tumour, he did not have a history of neurological or psychiatric difficulties, and there was no family history of a sleep disorder.

At the age of 24, polysomnography documented his night terrors. Spontaneous arousals punctuated all stages of sleep (12 a night), particularly stage three and four sleep. The patient's arousals from slow wave sleep were typically sudden and included restlessness, vocalisation, and looking accompanied by paroxysmal electroencephalographic activity (EEG). After starting clonazepam (0.5 mg at bedtime), the episodes of night terrors decreased, but he developed enuresis.

There are few documented cases of pavor nocturnus from neurological disturbances. Reports suggest that night terrors may occur as a consequence of a right temporal lobe seizure focus, particularly stage three and four sleep. The patient's arousals from slow wave sleep were typically sudden and included restlessness, vocalisation, and looking accompanied by paroxysmal electroencephalographic activity (EEG). After starting clonazepam (0.5 mg at bedtime), the episodes of night terrors decreased, but he developed enuresis.

Some of these pavor nocturnus patients have had complete resolution of their symptoms after appropriate treatment. In other cases, the symptoms persist. The treatment of pavor nocturnus is typically supportive and may include psychological counseling, medication, or other interventions. However, the specific treatment approach will depend on the individual case and may require a multidisciplinary approach.

Figure: Cerebellar astrocytoma adherent to brainstem.